



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : A61K 39/395, C07K 16/00, C12Q 1/00, G01N 33/53, 33/567, 33/574		A1	(11) International Publication Number: WO 00/23109
			(43) International Publication Date: 27 April 2000 (27.04.00)
(21) International Application Number: PCT/US99/24176 (22) International Filing Date: 15 October 1999 (15.10.99) (30) Priority Data: 60/104,510 16 October 1998 (16.10.98) US 60/121,624 25 February 1999 (25.02.99) US (71) Applicant (for all designated States except US): THE REGENTS OF THE UNIVERSITY OF CALIFORNIA [US/US]; 1111 Franklin Street, Oakland, CA 94607-5200 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): LANDER, Arthur [US/US]; 1850 Glenneyre Street, Laguna Beach, CA 92651 (US). KORC, Murray [US/US]; 7 Blanchard, Irvine, CA 92697 (US). (74) Agents: KIRCHANSKI, Stefan, J. et al.; Graham & James LLP, 14th floor, 801 S. Figueroa Street, Los Angeles, CA 90017-5554 (US).		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>	
(54) Title: GLYPICANS FOR THE DETECTION AND TREATMENT OF HUMAN CARCINOMA			
(57) Abstract			
<p>Glycosylphosphatidylinositol- (GPI-) anchored HSPG glypican-1 is strongly expressed in human breast and pancreatic cancer – both by the cancer cells and in the case of pancreatic cancer the adjacent fibroblasts – whereas expression of glypican-1 is low in the normal pancreas and in chronic pancreatitis. Treatment of two pancreatic cancer cell lines, which express glypican-1, with the enzyme phosphoinositide-specific phospholipase-C (PI-PLC) abrogated their mitogenic responses to two heparin-binding growth factors: fibroblast growth factor-2 (FGF2) and heparin-binding EGF-like growth factor (HB-EGF). Treatment of MDA-MB-231 and MDA-MB-468 breast cancer cells with PI-PLC abrogates the mitogenic response to two heparin-binding growth factors, heparin-binding epidermal growth factor-like growth factor (HB-EGF) and fibroblast growth factor-2 (FGF-2). Syndecan-1 is also expressed at high levels in breast cancer tissues as well as breast cancer cells by comparison with breast normal tissues. Temporary or permanent transfection of a glypican-1 antisense construct attenuated glypican-1 protein levels and the mitogenic response to FGF2 and HB-EGF. Glypican can be used to detect the carcinoma <i>in vitro</i> and therapeutics that either bind to (<i>e.g.</i>, antibodies or drugs), remove (<i>e.g.</i>, enzymes) or prevent the expression (<i>e.g.</i>, antisense constructs) of surface of the extracellular domain of glypican-1 are effective in retarding the growth of glypican-responsive carcinomas.</p>			

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